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ABSTRACT

These proceedings contain the summaries of 60 presentations. Among those included are: "Desk Top Publishing & Experiential Literacy Material" (Arnold); "A Description of the U.S. Experience in Providing Vocational Skills to Individuals with Low Literacy Skills" (Barbee); "Audio-Disk Technology" (Bixler, MacClay); "Technology for Teachers: A Group Instruction Communication Network" (Brown); "Application of Interactive Video" (Gacka et al.); "Methods of Incorporating Technology into an Adult Resource Learning Center" (Gold, Chetelat); "Technology Breaks the Print Barrier" (Harrington, Sokol); "PLATO: Past-Present-Future" (Manak et al.); "Technology and Adult Education: The Massachusetts Model" (Milley); "Interactive Videodisc Systems for Adult Learning" (Pyatte); "Technology & Literacy" (Turner); "Beyond Word Processing: Using Interactive Writing Software" (Bartholomew); "The ENFI Project: Computer Networks, Collaborative Writing, & Literacy" (Batson); "Adaptive Uses: Older Technologies for Literacy in Developing Countries" (Brace); "Using Databases for Developing Thinking Skills in Adult Literacy" (Budin); "Adult Beginning Reading Instruction & the Computer" (Carman, Lower); "Meeting the Needs of Adult Learners" (Copeland); "Comprehensive Competencies Program" (Dassance); "Computers in Schools" (Gilbertson-Winburne, Green); "Adults' Attitudes toward Computers" (Lewis); "Using Computer Technology in a Volunteer Tutor Literacy Program" (MacCallister); "Reading, Thinking, & Computing" (Marshall); "Setting Up and Managing a CAI Laboratory" (Miller-Parker); "American Ticket: Electronic Motivation & Learning" (Oliver); "Educational Needs of Dislocated Workers" (Park); "CAI and the Adult Student" (Whittle); "Literacy Efforts Involving CAI in Missouri" (Jorgenson, Hollenbeck); "Dropouts: A Holistic Approach" (VanBrugghen); "Language Skills Improvement: The COMPRIS Experience" (Davies); "Proven Use of Human Voice in Interactive Software for Non-Readers" (Eversole); "Integrating Reading & Writing Software into a Literacy Curriculum" (Jagger); "Computerized Help for Adult Illiterates" (McConkie, Zola); "Creating Your Own Software for

ABE/GED" (Marshall et al.); "Developing a Statewide Toll-Free Hotline" (Martin, Hudson); "Beyond Basic Literacy: Critical Reading with LECTOR" (Orndorff); "Templates for Literacy" (Stone); "Effective Use of Computers & Software in Adult Literacy Programs" (Szatkowski); "Information Sharing: The Goal Oriented Adult Learning Program" (Weyers et al.); "A New Path to Literacy: The Microcomputer & Interactive, Language Experience Based Approach" (Wangberg); "Enhancing Reading & Writing with Current Software" (Young); "Using Video Packets for Staff Development in ABE" (Fleischman, Tibbetts); "Microcomputers and Teaching Styles" (Migliorelli); and "Computers and the Role of Teachers" (Moscow). (YLB)

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# Adult Literacy and Technology Conference

## Proceedings

June 4 - 7, 1987

University Park, Pennsylvania

compiled and edited by

Avis L. Meenan
Patricia E. Burns

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Preface:

## ADULT LITERACY AND TECHNOLOGY GOALS

1. To support the development of technology use in adult literacy programs, applying the unique capabilities of technology to the areas of management and instruction, and helping to provide solutions for the national problem of functional illiteracy
2. To create an effective dissemination system which will provide ready access to information on computers and other forms of technology,including selection of hardware and software, training, curriculum design, funding, evaluation, and organizational recommendations for adult literacy programs.

The Adult Literacy and Technology Conference is part of a larger project which is made possible through a grant from the Gannett Foundation. The project is coordinated by the Institute for the Study of Adult Literacy at the Pennsylvania State University on behalf of the national Adult Literacy and Technology Steering Committee. Other components of the project include:

1. **Communication:** The communication component includes publication of a quarterly Adult Literacy and Technology Newsletter and management of a "Technology Bulletin Board" on LitLine. Both the newsletter and LitLine use are designed to highlight important information on technology in adult literacy. Support for LitLine for project use is given by the U.S. Department of Education, Division of Adult Education.

2.**Training:** The training component provides consulting service from ten experts in the use of technology in adult literacy programs who were selected and trained to serve as consultants to the general public. The Technology Consultants are based regionally throughout the country (see list).

Note: for more information concerning the ALT project, contact:
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# PRESENTATIONS ON EVOLVING TECHNOLOGY

## Desk Top Publishing for Experiential Literacy Materials

David L. Arnold

Norman and Malicky (1986), Kozol (1985), Brocket (1984), and others argue the power of experiential language materials, developed from the stories and communities of those being taught, in adult literacy instruction. As learners recognize themselves and their times and places in the printed word they will develop a sense of written language as a link to experience and community rather than only a technical process. Kozol also (1986) suggests that such methods can enhance the acceptance and sharing of literacy within families, thus weakening the "cycle of illiteracy."

Producing such material is difficult. Professional production as argued by Brocket (1984) cannot cope with limitations of economy of scale and timeliness. Amateur techniques are often slipshod, doing little to help convince the reader or their families that they are engaged in a worthwhile effort. However, desk-top publishing software, high resolution laser printers, and graphic scanners offer an approach to low-cost production of truly individualized literacy material of near commercial quality. Text and graphic materials for individuals, families, and specific community programs can be locally produced with small, easy to operate systems.

This presentation will discuss the rationale for production of experiential literacy materials and consider samples of materials produced by a desk-top publishing system. Possible systems ranging from individual installations to networks based in university or community college centers will be proposed.

## A Description of the U.S. Experience in Providing Vocational Skills to Individuals with Low Literacy Skills.

David E. Barbee

The most important finding of the Center for Advanced Learning Systems (CALLS) Report is that:

. job skills and literacy skills are best taught together in

programs tailored to individual needs.

It was found that job skills can be taught to people who cannot read, write or compute. As they learn job skills they can also learn these basic skills of literacy. This is done by using both personal knowledge and job knowledge as the content of the literacy training. It was also found that people learn better when programs are tailored to their individual learning needs. This is done by carefully designing training that:

- is controlled by the trainee
- is interactive
- teaches the skills required of the job
- is fully understandable to the trainee
- provides opportunity for practice and self-testing
- provides the trainees with frequent "feedback" on their progress and
- tracks the results and uses them for improvement.

This seems to make moot the other possiblilties that exist in providing job skill training to the "low-literate." Teaching literacy skills before technical skills was found to be both less effective. Teaching the skills separately was found to be both less effective and less efficient. Teaching technical skills by using techniques that do not require literacy would leave the worker without the skills for further learning required on most jobs.

## Audio-disk Technology

Brett Bixler Connie Maclay

Computer-assisted instruction (CAI) courseware for adult beginning readers was developed during the 1984-86 fiscal years with funding from the Pennsylvania Department of Education, Chapter 1 and 310 Adult Basic Education Special Projects. This courseware uses a "whole word" approach with some word building activities in teaching 1,000 high frequency and functional words.

The goal is expanded word recognition for adult beginning readers. The courseware is interactive, branching and responding to the user's answers and needs. It runs on an Apple IIe microcomputer with two disk drives, color monitor, and printer. The courseware consists of 28 double-sided disks which deliver the instructional program and record student responses.

An evaluation conducted during 1985-86 in a correctional institution indicated significant gains in word recognition, the time needed to correctly identify a word, and reading levels (as compared to those taught by traditional methods). Retention of vocabulary after a ten-month period was at approximately ninety percent.

The original set of courseware uses a speech synthesizer (Echo-GP from Street Electronics). During 1986-87, the courseware was converted to an audio-disk medium. In this session, this technology will be discussed and demonstrated (Instavox RA-12 from Educational and Information Systems, Inc.).

## Technology for Teachers: A Group Instruction Communication Network

Sally Brown

Most computer-based education has been designed with the computer as instructor and the learner interacting one-to-one with the instructional software. The technology to be demonstrated utilizes the computer as a tool for teachers who provide instruction to a group of learners. The computer is used as a presentation device utilizing audio-visual equipment and as a monitoring and feedback device for teachers and students. The system is designed to improve classroom management and facilitate the use of effective teaching methods while increasing student participation and student-teacher interaction. It allows teachers to provide quality instruction to groups and, thereby, to reach more students while still being able to employ tutorial strategies.

The system, called the Discourse Educational Communication System, permits all students to respond on any given occasion by typing full sentence or short answer responses on individual keyboards with displays. These studycoms are connected to a single computer with a monitor. The students' responses are displayed on the monitor for viewing by the teacher. The operating software allows for open-ended and spontaneous questions as well as prepared questions with correct answers. It provides options for

giving immediate feedback through the system for correct responses. The teacher's monitor also indentifies answers as correct and enables easy monitoring and appropriate individualized feedback from the teacher. Operating software allows for teacher-paced lessons, self-paced instruction and multiple group instruction. Teachers can also control the presentation of slide, videotape, videodisc and text material during instruction.

In summary, the Discourse system is a classroom communication system based on the philosophy that the teacher is critical to instruction and that technology can be used to enhance the role of the teacher in classroom or group settings.

## Application of Interactive Video

Dr. Richard Gacka Kathryn and Tony Ferralli

Computerization of instruction in the area of adult literacy faces many potential problems: graphics must be of sufficient quality to facilitate and maintain interest; demands for user reading skill must be minimized; the range and availability of instructional materials must be extensive; the content must have relevance to the real life needs of the students; and materials and equipment must be flexible enough to accommodate unique local needs. This presentation will display a system that addresses these areas and provides solutions to the underlying problems. Using a format wherein participants will be taught to read an unfamiliar, non English coding system, the presentation will illustrate the quality of graphics, degree of flexibility, and scope of individualization that is possible. The applicability of computer directed optical laser disk, digitized phototgraphy, customized random video and audio access, and user programmed branching and video control will be demonstrated.

The content of the simulation will include audio and video materials developed by High-Tech Options, a company specializing in modification and development of interactive instructional systems, in coordination with the Northwest Tri-County Intermediate Unit Adult Education Program. During the course of the demonstration, both locally developed and customized commercially available materials will be illustrated. The aim of the presentation is to emphasize the degree of flexibility and ease of modification that is available with an emphasis on the role of the adult educator in the developmental process. Equipment used during the presentation will include a Sony VIEW system (Visual Information Enhanced

Workstation), Sony MVR 5500 Still Video Recorder, Tamron Film Video Processor, and a Tandberg random access computer controlled cassette recorder.

This equipment represents a significant advance over commonly available microcomputer based systems and reflects what we feel will be the next generation of instructionally oriented technology.

## Methods of Incorporating Technology Into an Adult Learning Resource Center

Beverly Gold Frieda Chetelat

This presentation, "Methods of Incorporating Technology into an Adult Learning Center ," gives a step by step analysis of the methods used to create an Adult Learning Center. It is a place where learners can drop-in at their convenience to use educational technology to help them to gain proficiency in reading, writing, and math or to prepare to take the G.E.D. The way in which the Center serves twenty to thirty adults daily will be discussed and materials, both traditional and technological, will be be displayed. A slide presentation will be included to show the location, range of learners, and some of the software used. In addition, forms used to keep records of assignments and for statistical analysis will be distributed. Finally, an evaluation and discussion of future plans will culminate the presentation.

## Technology Breaks the Print Barrier

Mary Harrington Michael Sokol

Reading machines have provided blind and visually impaired people with direct and independent access to printed material. This technology has also proven effective as a reading aid for people with learning disabilities such as dyslexia. Reading machines have potential as assistive devices in reading education and in adult literacy programs.

The history of optical character recognition (OCR) technology dates back to the late 1960's. Scanners were developed for data entry and as reading machines with synthetic speech or tactile output for blind and visually impaired people. The Kurzweil Reading

Machine and Telesensory System's Optacon were two of the earliest successful reading machines for the blind.

Reading machine technology has gone through substantial development. There have been significant improvements in omnifont character recognition and in the quality of synthetic speech. And the cost of this technology is coming down. As a result, there is an increasing interest in using the technology with people who are learning disabled or illiterate as well as with school age children who are learning to read.

Reading machines offer blind people many benefits over other methods of reading text. Reading machines give the user more direct and confidential access to material than having a personal reader. And reading machines offer immediate results. It is often difficult to quickly get materials tape recorded or produced in Braille.

Many of the advantages of reading technology for the blind can be transferred to people with learning disabilities, to people who are illiterate, and to those learning English as a second language. Exactly how this technology will be used in these areas is open for discussion. There is supporting information from librarians and disabled-student services counselors using the Kurzweil Reading Machine in their programs that reading machines are useful for people with various reading problems.

With reading machines, reading is an active rather than a passive process. If the user wishes to have a passage read to him or her again, it is easier to instruct the machine to perform this task than to ask an (often intimidating) person to do it. And a computer allows for self paced reading.

Additionally, reading machines can allow people who are just learning to read to access material that is above current reading level. They can deal with everyday types of materials, allowing them to function more effectively in daily life.

Technology has noteworthy implications for people who are learning to read or are unable to read. We would like to explore the potential of this technology as it relates to literacy.

## THE LEARNING STYLE SURVEY:
## Using Interactive Videodisc Technology To Assess Preferred Learning Styles

Cindy Johnston Tim Songer

In 1985, Central Piedmont Community College was awarded a grant from the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE). Through this three year grant, the college is developing and testing a core curriculum of micro-computer based reading courseware for adults functioning between the fourth and eighth grade levels. During the first year of the grant, an interactive videodisc program, The Learning Style Survey, has been produced. This experimental assessment instrument is designed to discover the preferred learning style (auditory or visual) of low-literate adults. This type of information was previously inaccessible using standard paper-and-pencil instruments.

Cindy Johnston, Head of CPCC's ABLE Program and Tim Songer, FIPSE Project Coordinator will demonstrate the Learning Style Survey and describe how it is currently being used at the ABLE Centers. Results from the national field test will also be discussed with implications for the next phase of development.

## Plato: Past, Present, Future

Ray Manak Ginny Gordon
Barbara Simpson

The Job Training Partnership Act (JTP) is federal legislation directed towards serving the economically disadvantaged. The services provided by the Act are targeted toward removing barriers to employment, including lack of education. To help remove this barrier, Service Delivery Area #23 (SDA), Canton, Ohio, provides a core of computer-based educational programs in six locations within a five county area.

The SDA uses the micro-Plato System of hardware and software to provide adult dropouts and graduates a self-paced, competency-based learning system. Diagnostic testing and skill development is available for courses in basic skills and high school math, reading and English. Additionally, high school science and social studies

curricula are provided. Class structure is designed to utilize both computer technology and instructor support to provide the maximum potential for learning.

In six rural and urban locations, adults participate in remedial programs during two hour sessions, five days per week. In addition to the Central JTP program, satellite locations have been developed in conjunction with public school systems, community-based organizations and a technical school.

The typical adult progresses through the following steps:

1) Pre-assessment to determine strengths and weaknesses
2) Introduction to computer-based learning
3) Hands-on instruction for terminal use
4) Computer-based instruction
5) Small group and/or individualized instruction with certified instructors
6) Post-assessment to determine skill mastery
7) Survey to provide on-going evaluation of the program

The results of this approach are impressive. At the Central JTP agency 96% of 290 adult participants have received General Education Development Certificates (GED). An equal number of adults have upgraded math and writing skills. The average time spent in GED preparation is ten weeks and in upgrading skills, adult spend an average of four weeks. Other locations within the SDA report similar results.

After meeting initial goals, the majority of adults either enter unsubsidized employment or enter a training program. The success of this program is due, in part, to the comprehensive software available to address a myriad of adult academic weaknesses and to the commitment of staff to make the learning process meaningful.

## Technology and Adult Education: The Massachusetts Model

Robert Milley

Through the Massachusetts State Department of Education during the past four years, the Adult Basic Education Program has

been establishing statewide practices for the integration of technology with instruction. By means of a joint project with the Merrimack Education Center, state-funded centers have developed a capacity to address a variety of adult client needs for ABE, ESL, GED, and other populations. This session will provide information on various aspects of the development of successful computer-based programs. Visions for effective computer use will be shared, and the implementation process from a selection of student objectives through the final phases of integration will be examined. A process for identification and selection of software appropriate for adult learners will be reviewed, and hardware alternatives for delivering instructional and administrative applications for a broad range of adult learning environments will be discussed. Successful staff development models for preparing adult educators for implementing technology with on-going programs will be shared.

In light of the changes that technology has brought to society and the workplace, a consideration of recently emerging "basics" will be offered. Also provided will be a reporting on recent efforts in Massachusetts to implement writing programs that utilize word processing. Through this session, attention will focus on the shifting role and responsibilities of the adult educator as technology impacts the instructional strategies and curriculum content. Opportunities will be provided for discussion and participants' questions on a variety of issues and concerns.

### El Barrio Popular Education: Bilingualism and Literacy

Pedro Pedraza, Jr.

El Barrio Popular Education, a community-based nonprofit organization, offers unique literacy classes for adults and children in the E. Harlem community of El Barrio (New York). Composed primarily of Puerto Ricans, the community is characterized by a complex array of bilingual literacy abilities. The majority of adult Puerto Ricans are bilingual but not necessarily biliterate. Functional as well as complete illiteracy in both Spanish and English is a problem that increasingly interferes with their participation in building a self-sufficient economic base and in identifying and solving educational, social, and community problems. Young children are adversely affected by adult literacy problems in the home--- problems that inhibit parents from actively participating in their

children's "in school" education and offering parental support on school activities.

El Barrio Popular Education employs a literacy instructional methodology that integrates culturally relevant lesson content. The program has experimented with computers and will now incorporate the high end of the Apple technology (Macintosh Plus) along with a satellite communication network. Program participants include students at a public school and adults (including the parents and grandparents of the school children) at a neighborhood nonprofit organization.

The Center for Puerto Rican Studies at Hunter College is spearheading the effort and research in collaboration with other organizations and institutions in New York, San Diego, Boston, and Puerto Rico. Although the focus is on bilingual literacy skills, it is expected that the program will be a useful model for literacy instruction in general.

## Interactive Videodisc Systems for Adult Learning

Dr. Jeff A. Pyatte

It is widely accepted that designing instruction for adult learners requires the designer to pay attention to their special characteristics and learning preferences. For instance, the typical adult learner likes to be actively involved in the learning process, prefers to learn in a non-threatening climate, prefers learning based on experience, and enjoys problem-centered learning with practically-based learning activities.

Interactive videodisc learning delivery systems consist of a microcomputer, a videodisc player, a monitor, and a learner input device, all interlinked so they communicate with each other and with the learner. Usually, a print-based student book is added to the system so that users feel at home during the learning experience.

These components are used in designing instruction which involves the learner in learning events that are under complete learner control. The system can be made available 24 hours a day, offer patient instruction of consistent high quality, approach the learner very privately through multiple learning channels, and offer the learner an endless number of opportunities to interact with the instruction through the delivery system input device.

Participants in this session will learn what an interactive videodisc delivery system is, why learning delivered through this

medium is better for the adult learner than instruction delivered in many other ways, what are the benefits of the learning provider, and some of the research which is used to justify using the interactive videodisc as a delivery system.

Through hands-on activities with an interactive program designed for adult learners, participants will experience the thrill of this exciting medium first hand.

## Principles of Alphabet Literacy (PALS)

Mr. J. Chris Rea

OPENING THE DOOR TO A MORE PRODUCTIVE FUTURE

Recent government estimates tell us that at least 13% of all adults in America cannot read or write. Millions more are functionally illiterate and cannot perform such important tasks as filling out job applications, passing driver's license tests, writing checks, as well as enjoying many of the rewards of our society.

Now technology can help address this problem with the IBM Principle of the Alphabet Literacy Systems (PALS). When combined with the interactive technology of the IBM InfoWindow system, this innovative teaching method can help many adolescents and adults achieve higher levels of reading and writing skills. And that can be the first step to a more productive, more rewarding future.

PUTTING TECHNOLOGY TO WORK FOR PEOPLE

PALS is an interactive instructional program. The IBM InfoWindow System is an exciting presentation tool that combines the power of the personal computer with the flexibility and excitement of the laser videodisc.

Together, these elements produce an effective literacy program. One that can be especially helpful in reaching adolescents and adults with reading and writing ability below the sixth grade.

PALS INTRODUCES A NEW WAY TO LOOK AT WORDS

PALS is based on a fable in which an alphabetic system is invented to prevent war between two kingdoms. The story is intended to dramatize the importance and power of the written word and reinforce, through vivid examples, the necessity of learning to read and write.

By interacting with the program through the InfoWindow system, PALS students learn the alphabetic principle, or how to combine the 26 letters of the alphabet to form words.

In addition, students are also taught phonemic spelling-or phonics. This means that they learn to read and write by recognizing different "phonemos" or letter-sounds.

This "sound-it-out" approach enables students to grasp the connection between spoken words and written words more easily. Students who use this method when writing learn to choose the "best word" not settle for one they know how to spell. And this helps them achieve higher word recognition more quickly.

INFOWINDOW DELIVERS EXCITEMENT - AND RESULTS

PALS offers a proven approach to teaching reading skills. And now, with the added presentation power of the IBM InfoWindow system, this approach can be even more dramatic.

An InfoWindow system used with PALS combines the power of an IBM Personal Computer with vivid graphics, pictures and audio from a videodisc player to make presentations more active, more involving. The alphabetic, phonemic learning method and InfoWindow technology come together in the PALS learning center. This on-site learning facility provides an interactive, individualized environment for up to 15 students at a time.

## Developing Courseware to Teach Reading Process Skills

Tim Songer Cindy Johnston

In 1985, Central Piedmont Community College was awarded a grant from the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE). Through this three year grant, the college is developing and testing a core curriculum of micro-computer based reading courseware for adults functioning between the fourth and eighth grade levels. The project team is halfway through the grant period and has completed twenty modules of CONTENT-based courseware (e.g. Explaining Symptoms and Following Doctor's Directions, Dealing with Alcohol Related Problems, etc.). The second phase of development will concentrate on the design and production of courseware that focuses on the PROCESS of reading.

By testing the first phase of courseware with low-literate adults at the ABLE Centers, the project team has learned the importance of including a large number of exercises that deal with reading process skills. The courseware currently under development allows the student to interact with the text in a variety of ways. Process skills such as setting goals for reading, rapid search for

information, summarizing, classifying and restructuring are presented in the context of a single two page text passage.

Tim Songer, FIPSE Project Coordinator and Cindy Johnston, Head of CPCC's ABLE Program will demonstrate the couseware developed to date. Discussion generated from the demonstraton will likely focus on the complexity in developing reading couseware that deals effectively with both content and process issues.

## Technology and Literacy: Its Past and Its Future

Terilyn C. Turner

This presentation will examine the current practices in adult literacy instruction nationally and describe the operation of two centers in which technology has been the focus of a total basic skills curriculum design. The ABLE Center, which opened in July, 1983, has received national recognition for its innovative design and integration of various technologies in a comprehensive educational curriculum. The Technology for Literacy Center, which began operation June 1, 1985, is an adult literacy center which employs a wide range of technologies in basic skills instruction. An overview of issues facing literacy programs in the area of technology will be given, as well as possible solutions and projections for future initiatives.

# PRESENTATIONS ON INSTRUCTION

## Beyond Word Processing: Using Interactive Writing Software

Carole Bartholomew

**Workshop Description**

The workshop is designed for adult education/literacy instructors and tutors who want to obtain information about the writing process, word processing, and interactive writing software to help adult learners improve writing skills. A demonstration of three commercially-available interactive software programs for the Apple computer will be included.

**Workshop Agenda**

I. Adult Learners and Writing Skills
   - A. Communication with others
   - B. Sharing of life experiences
   - C. Necessary to obtain and keep jobs
   - D. Important for self-esteem and self-image

II. The Writing Process
   - A. Prewriting
   - B. First draft
   - C. Writing
   - D. Response
   - E. Revise/Edit
   - F. Final copy
   - G. "Publication"

III. Word Processing and the Writing Process
   - A. Focus on thinking and creating
   - B. Alternative to handwriting
   - C. Language experience approach
   - D. Ideas become real

IV. Interactive Writing Software
   - A. Prewriting Workshop (Milliken)
   - B. Writing a Narrative (MECC)
   - C. Writing a Character Sketch (MECC)

## The ENFI Project:
## Computer Networks, Collaborative Writing and Literacy

Trent Batson

I'll report on the three-year ENFI Project, started at Gallaudet University, and now also running at the University of Minnesota and Northern Virginia Community College. The Project uses local-area networks with a special communication utility that supports interactive writing between teacher and the class. It includes both deaf and hearing students at the three sites.

Behind the Project is the theory that making writing more like speaking helps students who have difficulty with writing. Using ENFI (English Natural Form Instruction), students write to each other and to the teacher as if they are in a conversation. They are caught up in the context of the moment, can write to a known and present audience and can borrow words and phrases from the others to help them express themselves. They get immediate feedback, helping them to improve their command of written English.

ENFI has been used with students starting from scratch in English, and also with students learning foreign languages. We build on the words that the students do know, expanding the context as parents do with their children who are learning a first language.

The Project has enjoyed good results with the three hundred students who've taken ENFI classes in our first three years. The Project is established at Gallaudet and growing nationally.

## Adaptive Uses:
## Older Technologies for Literacy in Developing Countries

Judy Brace

The issues of equity of access, uniform quality, and cost-effectiveness are paramount in the minds of international donor agencies faced with the educational problems of developing countries. There has been an attempt to combine the methodolgies of instructional technology with the available resources in both formal and nonformal educational settings. One of the most promising techniques has been to take the lessons of instructional design, modularized, distributed, and interactive learning which plays such a prominent part in computer-assisted instruction, and

apply them to a ubiquitous, affordable medium -- radio. The successes of pilot projects to use radio as the medium of instruction may contain lessons for reaching out with education to learners in the U.S.

Countries as different as Mexico and India have turned to the media of television and radio to teach literacy through soap operas with supporting print materials and tutorials. Mexico has set up a grass roots radio program to encourage illiterates to attend classes by interviewing those already attending, by reading letters of support from class "graduates," by announcing times and places of classes, and by allowing tutors to communicate information to each other.

In a number of countries, the press is taking a role in combatting illiteracy by developing complete newspapers for rural, low-literate populations.

What is the potential for applying these older resources to disadvantaged populations in the U.S.? What is needed to develop the programmatic materials, ensure support from the privately owned media, and to integrate such programs into ongoing community efforts?

## Using Databases for Developing Thinking Skills in Adult Literacy

Howard Budin

Literacy involves not only the decoding of text in reading, but also those thinking and problem solving skills that enable one to make sense of and have some control over one's environment. In fact, the ability to think critically about information and to use information to solve problems are vital contributory elements to effective reading.

I have been exploring using computerized databases as a thinking tool for some years, training teachers and students over a broad age range. I have found, along with many others nationwide, that using and creating one's own databases can improve logical and critical thinking abilities and involve people in solving problems that are meaningful to their lives. It gives valuable practice in designing data structures, entering data, making reports from selected data, and so forth.

This presentation would introduce literacy practitioners to the objectives of having students create databases, as well as to the

mechanics of using a database. Examples of created databases would be shown using an Apple computer (on Bank Street Filer and/or PFS:FILE). In addition, other useful ideas for adult databases would be developed and examined. Although the focus would be on student use of databases, teachers should be able easily to see administrative uses for themselves.

## Adult Beginning Reading Instruction and the Computer

Priscilla Carman
Carl Lower

Computer programs can and should be integrated into reading programs for adult beginning readers. The computer offers unique opportunities to exercise several of the learner's modes of learning and also gives the student the chance to become familiar with a tool which is becoming increasingly important in everyday life.

This sharing session will provide background information about the student and a rationale for the use of technology in this case. A portion of the session will focus on how the computer was used to:

1) provide for the transfer of skills learned in the core curriculum
2) accomodate the student's learning strengths
3) boost the morale and self-esteem of the learner.

Finally, a short demonstration and discussion will give the participants some insight into the student's perspective of technology and adult literacy.

**Meeting the Needs of Adult Learners: The Development of an Individualized Remedial Reading Program Using Graded Materials and Computer-Assisted Instruction (CAI).**

Barbara J. Copeland

**PROBLEMS ADDRESSED:**

1. Adults enrolled in a high school completion program who were reading
   level 6.
2. New SC requirements for a high school diploma: 20 units plus completion
   of an exit exam.
3. Non-traditional schedules to mesh with adult students' work schedules.

CONTENT DISCUSSED IN THIS SESSION: Open-entry, individualized reading program developed at the Poynor Adult Center in Florence, SC. Using a competency-based approach and high interest/low vocabulary materials, the program presents reading skills sequentially in accordance with the Reading Objectives in the SC Basic Skills Assessment Program. The TABE reading test forms 3 and 4, levels M and D, are used as pre and post-tests. The comprehension score determines the reading level of materials assigned. An assignment catalog was developed to provide a systematic method of assigning materials. Graded print material, computer software, and audio tape materials were previewed and catalogued according to grade level and skill area. Study modules were developed from these materials with two forms of post-test for each module. A study schedule listing skill areas, study modules, and tests is given each learner. The learner studies the assigned materials, completes practice exercises, checks work, makes corrections, and takes a test on each module. Help from the instructor is available at any point of the process, and the learner is given immediate feedback. If the learner still needs to upgrade that particular skill, the instructor assigns an appropriate module or, after tutoring in the weak areas, asks the learner to repeat the initial assignment.

Progress is monitored from start to finish, using the study schedule to log completion of modules and test scores on a daily basis. Reinforcement is provided at intervals during each module.

Clear expectations are established when a learner enters the reading lab so that each student can move ahead, secure materials, ask for help, or move to the computer. An information sheet explains how the lab is set up, the learner's responsibilities, the grading system, and how to successfully exit the program.

The summative evaluation includes the learner's gain or loss, number of study hours, and modules completed. Ongoing revision of the modules is necessary.

## Comprehensive Competencies Program: A High Tech Approach to Management and Delivery of Instruction

Jewell Dassance

This presentation describes the elements, structure and philosophy of the Comprehensive Competencies Program (CCP) and how it can be used in classrooms, community organizations and the workplace to provide effective basic skills instruction. Developed by the Remediation and Training Institute (RTI) with support from the Ford Foundation, the system is used in over 200 community-based organizations, schools, correctional institutions and job training programs throughout the nation and in Canada.

CCP is individualized and competency based using state-of-the-art technologies to teach competencies in a wide range of academic and functional subjects ranging from elementary reading and arithmetic through high school and introductory college-level science, mathematics, humanities, social studies, and writing, as well as functional competencies determined necessary for success in the family, society and economy - including job getting and holding, consumer skills, citizenship, health and community participation.

This presentation will focus on use of CCP in adult literacy programs. Participants will receive background information on CCP as well as samples of CCP processing tools.

## The Project Literacy Curricula--Using the Newspaper

Dr. Russell Doll Sharon Hoffer

After a two and one-half year research study of existing literacy programs, the staff of Pan-Educational Institute sought to develop the Project Literacy curricula to build upon what was successfully working with the adult learner and to integrate on-going assessments and practical learning formats.

The daily newspaper was selected to serve as the vehicle for adult learning and the specially developed curricula was conceived to address specified learning objectives.

Every fourth unit was set up as a review lesson to determine levels of skills attained to that point. The final assessment was developed using the reading and life-skills objectives used in the Missouri Basic Essentials Skills Test (B.E.S.T.) which measures skills at the 8.5 grade level. The program is in its third year of pilot testing in the Kansas City metropolitan region. Presently, over 200 facilitator/reader pairs meet weekly at one of nine area sites. To date, over 400 persons have been tracked in the project using weekly records and assessment results. The 1986 summary report details services provided, drop-out and attendance rates as well as metropolitan site coverage

Dr. Russell Doll and Sharron Hoffer will present a summary of the project units, evaluation results and data as well as its potential use in other communities.

## Computers in Schools: from Teacher's Assistant to Colleague

Dewey L. Gilbertson-Winburne Jeff Green

The Creative Rapid Learning Center's (CRLC) Comprehensive Competencies Program (CCP) for people who have dropped out of a public school is a competency-based, individualized, self-paced education program. It emphasizes a multimedia approach to education. Learners study utilizing print, audio-visual, and computer instructional materials.

Until the recent inclusion of an IBM Local Area Network (LAN), the CAI portion of our classroom was underutilized in some cases and functioned merely as a drill and practice "sergeant" in others. This presentation will demonstrate the effective and affective ways

our alternative classroom has been improved through an IBM/CRLC joint study project.

First, as a state-of-the-art Learning Center for economically disadvantaged young adults, one of our goals is to bring the best of high technology to the economically disadvantaged learner. To that end, I will discuss the process of implementing the IBM LAN and accompanying courseware within the CCP curriculum. This process entailed matching curriculum objectives, selecting space in the hierarchic lesson matrix, and dividing and adapting the courseware elements into CCP study assignments.

In the second part of the presentation, I will explore the educational and vocational goals we have for the student/computer relationship. Simply put, we see the computer moving from the role of "drill sergeant" or teacher's "assistant" to that of "instructional colleague" while the student progresses from learner to instructor (peer tutoring) and, finally to designer (of student generated curriculum materials).

Finally, a student of our Learning Center will display and discuss the student, teacher, and administrative options the IBM LAN offers to adult education/instruction. We will utilize computer and video technologies in this part of the presentation to create an interactive "show and tell" session.

## Adults' Attitudes Toward Computers: Determining Perceptions

Dr. Linda H. Lewis

During this presentation, participants will have an opportunity to complete an instrument designed to measure adults' attitudes toward computers. This assessment tool, the Adults' Attitude Toward Computers (ATC) inventory, was recently developed for and validated with a sample of adult students enrolled in literacy education programs throughout the United States.

Since behavior is considered to be a function of one's attitude regarding a specific situation (Triandis, 1971), the ATC inventory was constructed to yield information about the feelings and perceptions that adults have about computers. The three factors that are measured-- GENERAL INTEREST, USEFULNESS, and COMFORT LEVEL -- provide a picture of students' readiness or reluctance to

use the new technologies. Based on the information that is yielded, teachers can develop appropriate strategies that can help to facilitate the learning process and support individuals as computers are integrated into the learning environment.

## Using Computer Technology in a Volunteer Tutor Literacy Program

Susan MacCallister

The Literacy for Every Adult Project is a service of the Richmond Public Library, in Richmond California. It's a volunteer program, recruiting people from the local community to help others learn to read and write better.

As part of the program, we have a Learning Center in the Library, equipped with two Apple IIe's and a large number of commercially available pieces of educational software. We have been in operation for three years, the Learning Center for two.

We will lead a share session during which we would talk about what various learners like about the computer, some contradictions of using computers to supplement a one-to-one, volunteer tutoring program, and a special emphasis of ours -- learners and word-processing -- ways in which it has worked particularly well, problems we've had with it, and where we expect to be taking it in the near future.

## Five Ways to Use Videodiscs in Literacy Training

Lucy Tribble MacDonald

This workshop will present the concept of interactive videodiscs and demonstrate how they can be used in literacy training. Participants will be able to preview a variety of discs from Grolier's Encyclopedia KNOWLEDGEDISC to Vincent Van Gogh and several problem solving discs. The discussion will include the use of videodiscs for bilingual instruction, for motivation, and for literacy training utilizing both sight and sound.

Participants will be able to see some specific literacy lessons as well as see how to adapt their own materials utilizing videodiscs.

### Reading, Thinking and Computing

Dr. Gail Marshall

READING, THINKING, AND COMPUTING is a session based on the assumption that adult learners can use the computer to acquire or consolidate skills needed to read at an adult level. The presenter will provide computer software and will demonstrate its use via a model lesson. Participants will be shown how to generate words from combinations of letters, thereby increasing vocabulary. They will also learn or review the relationships (homophone, synonym, antonym) between words. Presented with computer-generated reading passages, adults can learn to apply reading strategies and higher level thinking skills to written materials.

Participants will be encouraged to solve computer-based activities and discuss ways they can be used with adult learners. Participants will also be shown how to use the materials in individual, team or group settings as well as how to solve the activities with existing skills or by practicing new skills. The presenter will also demonstrate how the computer provides appropriate reinforcement and helps increase risk-taking as well as skill development and application.

Throughout the presentation the emphasis will be on integrating the materials and strategies with current successful forms of adult literacy instruction. Participants will be encouraged to share insights and strategies to increase the range of solutions for improving adult literacy.

### Setting Up and Managing a CAI Laboratory

Donna Miller-Parker

This share session will begin with a brief presentation about necessary considerations for the organization and management of a CAI lab. Included will be such items as disk storage, training of

students in computer use, managing student assignments, and organization of software documentation and student worksheets.

Following the presentation, participants will be encouraged to problem-solve solutions to specific problems with other participants.

## AMERICAN TICKET: Electronic Motivation and Learning

Bonnie B. Oliver

AMERICAN TICKET is a national adult literacy project that utilizes television, ancillary materials and community groups. The program is designed to motivate as well as to educate the functional illiterate adult through the confidential medium of television. This access has the potential of reaching millions of people needing educational assistance. The ancillary materials that will accompany the television series will be made available to the audience through a variety of accesses. This material will assist the learner with life coping skills as well as with reading skills. It will also give information on literacy classes in the viewers community.

The AMERICAN TICKET project will use the 325 Project PLUS Task Forces to connect the learner with the TV program, the ancillary materials and local educational programs.

Participants at this session, after the presentation and viewing of the television pilot, will be able to do the following:

- understand the AMERICAN TICKET project
- critique the pilot and ancillary materials
- determine their role in the AMERICAN TICKET project
- offer recommendations for maximum utilization of the project

## The Educational Needs of Dislocated Workers

Rosemarie J. Park
Rebecca Storlie
Rene Dawis

This year-long research project at the University of Minnesota was designed to get as much detailed information about dislocated workers as possible. What types of job were workers aiming for?

Were they planning to retrain? What resources were required to facilitate these transitions and what could the Unions, companies, government and educational institutions do to aid them?

More specifically we were interested in the nature of the training workers needed. We were interested in determining whether workers in industries facing closedowns or widespread layoffs have the basic reading and mathematics skills they need to learn new jobs or to successfully complete retraining programs. If they were lacking such skills, what were the factors which might influence workers' decisions regarding basic skills instruction and job retraining? Did they perceive a need for higher levels of basic skills in future jobs? What did they feel their own basic skill needs and those of others were? Was their idea of the seriousness of the job crisis predictive of their intention to seek training? Were demographic factors such as age, gender, and length of experience on the job influential in deciding whether to retrain?

In summary, this study was to make policy recommendations in respect to worker retraining. We hoped to have indication of the types of training needed, the support services workers required and the most effective modes of delivery. Basic skills programs in the United States have consistantly stressed the need for such programs but have consistantly failed to attract participants (Sticht 1983). Does such a need really exist? If so, what is the most effective way to provide continuing education so that people who need help will get it?

The answers to all these questions will be discussed in the presentation.

## CAI and the Adult Student: Pros and Cons

Steve Whittle

The success of CAI for promoting achievement at the elementary, secondary and college levels is well documented. However, the literature reveals a sharp controversy among adult educators on the issue of CAI and adult achievement. One side argues that the capability of CAI to individualize instruction, offer immediate feedback, and to provide interactive instruction promotes achievement for the adult student. The other side criticizes CAI as

a dehumanizing technology, for which no conclusive research on adult achievement exists.

The controversy is compounded by a lack of quality research on the issue. Not much research on adult achievement with CAI has been done, and the results of existing research are inconclusive.

# PRESENTATIONS ON MANAGEMENT

## How to Evaluate and Utilize Software

Carol Goertzel Gloria Still

The Women's Program at Lutheran Settlement House proposes to present a workshop for teachers and administrators on how to evaluate computer software in terms of its use of stereotypes, how to address these stereotypes, how to address these stereotypes within the classroom, and how to integrate the software into the curriculum.

The Women's Program has been utilizing and evaluating IBM software since September 1986 deciding how to incorporate it into classroom activities and how to utilize it as supplemental material while analyzing the content for stereotypes.

The presentation will focus on how to review material for stereotypes, which questions the viewer needs to ask her or himself about the pictures, the sentences, the stories and, then, how to utilize material that may be biased in a classroom setting that diffuses the bias. Often the software simply omits women, people of color, differently abled human beings, and the teacher needs to introduce these "unmentioned" members of our society into the discussion in class after the software is utilized. Once these omissions are pointed out to students, they will also begin to note who is included and who is excluded and the implications of exclusion or inclusion.

The presentation will also discuss how to utilize the software within a classroom setting and as supplemental material to classroom activities so that teachers can utilize software as they utilize ditto books reinforcing learning and developing student skills.

## Literacy Efforts Involving Computer-Assisted Instruction in Missouri

Evelyn Jorgenson Ruth Hollenbeck

The Missouri Basic Education System is a comprehensive CAI system designed for the Adult Basic Education programs in the state of Missouri. Diagnostic tests, objective tests, tutorial disks, and correlated textbook prescriptions are instrumental in this

mastery learning process. The management system is designed to be used by the teachers for enrollment, test grading, obtaining prescriptions, and generating individual achievement reports. This flexible program provides for the creation of new objectives, new tests, changed prescriptions, and many other possibilities.

### How to Get Your Computers Used

Richard K. Sparks

THIS SHARE SESSION WILL LOOK AT THOSE LITTLE THINGS THAT NEED TO BE DONE TO GET THE BEST USE FROM THE TECHNOLOGY AVAILABLE TO THE NON-READER.

TOPICS TO BE INCLUDED:

HOW TO INTRODUCE THE COMPUTER LAB
TYPES OF PROGRAMS TO USE
WHAT STAFF TO HAVE
INTERFACE WITH OTHER PROGRAMS
OPEN ENTRY/OPEN EXIT, HELP OR HINDRANCE
LITERACY AND BEYOND

PEOPLE ATTENDING THE SESSION SHOULD BE PREPARED TO ENTER THE DISCUSSION WITH THEIR OWN IDEAS OR OPINIONS SO THAT AS MUCH INFORMATION AS POSSIBLE CAN BE AVAILABLE.

### Dropouts: A Holistic Approach

Candace L. VerBrugghen

Pima County Adult Education (PCAE) in Tucson, Arizona, sponsors PCEdge (Pima County Education Group Effort), a special project for youth, ages 16-21. PCEdge is an individualized self-paced learning lab working with economically and educationally disadvantaged youth whose basic educational skills fall between the 4th and 8th grade level in reading, writing and/or math. The majority of our students are high school dropouts and/or learning disabled. PCEdge individualizes curriculum with the use of computers, videotaped programs, sound/slide programs, cassette taped programs, workbooks and tutoring one-on-one. PCEdge goes beyond academic remediation in that it also provides intensive personal and vocational counseling. Networking with others in the

educational community provides pre-employment and employability skills workshops and career exploration.

PCAE will present the nuts and bolts of setting up and managing an individualized program that will include: funding; physical set-up; curriculum development; hiring staff; outreach; student assessment; developing an EDP; teaching programs; vocational/academic/personal counseling; evaluation; and referral/follow-up. The audience will receive a packet which will include samples of pre/post test; procedural forms; program pamphlet; and program objective/resource sheets.

# PRESENTATIONS ON SOFTWARE

## Language Skills Improvement: The COMPRIS Experience

Mr. Ted Davies

Computerized Drill and Practice, Multiple Choice, Yes/No, True/False must give way to expert systems, A.I.-based, where students can acquire language skills experientially: students must be able to do as well as to know.

The presentation will review theory and practice and discuss recent researches into language acquisition, stressing the need for sound pedagogical approaches as the touchstone to sound computerized language learning.

Examples of computerized courses that are learner-centered while instructor-controlled will be given. They cover reading, thinking, grammar, spelling, punctuation, literature, report writing, etc., all based on communication theory. Language and meaning is central to language acquisition.

## Proven Use of Human Voice in Interactive Software for Non-Readers

Linda Eversole

1. **EXPLAIN THE DISCOVER INTENSIVE PHONICS METHOD**

Discover Intensive Phonics for Yourself in a phonics based method of teaching reading, writing and spelling. Adult students increase their reading capabilities dramatically after learning this decoding approach. It is based on the 42 sounds of the alphabet, including murmur diphthongs, digraphs, and special vowel combinations. Five phonetic skills help the student determine what the vowel sound will be, and two decoding skills simplify syllabification.

2. **SHOW HOW THE COMPUTER CAN BE USED TO MEET THE REQUIREMENTS OF SUCH A MULTI-SENSORY TEACHING TECHNIQUE AND THE NEED OF THE NON-READER.**

Recognizing the fact that the non-reading adult is unable to read materials on the screen, HEC Software developed an Audio Cassette Interface Board (ACIB). It synchronized the screen display with a tape recorder, providing excellent voice instruction for each lesson. The non-reader also needs illustrated lesson start-up

procedures. With the use of a soundtrack, initial computer presentation can give operating instructions. Additional drill and practice using audio cassette and cards is desirable to supplement computer lessons. The learning opportunity is amplified by the student's ability to see, hear and tactually interact with the computer. Branching can be used to provide reinforcement.

3. **EXPLAIN THE USE AND VERSATILITY OF THE AUDIO CASSETTE INTERFACE BOARD AND HOW IT CAN BE USED FOR DEVELOPMENT OF SOFTWARE FOR THE NON-READING ADULT.**

HEC Software first developed an ACIB for the Apple computer, and now, funded by a grant from the Dept. of Education, they have developed an ACIB for the IBM PC. These boards can be used by other developers to produce software for the non-reader in any subject area. The boards are fully reliable and work with any cassette recorder that has a remote control jack.

## Integrating Reading and Writing Software into a Literacy Curriculum

Christina Jagger

In order to integrate reading and writing software effectively into a literacy curriculum, a number of factors must be taken into account. Student characteristics, tutor characteristics, constraints of various settings, constraints of various computers, constraints of software design, software purpose and content, task demands, and instructional goals must be examined both individually and in combination. The session begins with an examination of a pyramid model depicting the relationships among these variables.

Participants will then use the model to contrast pairs of software programs which cover similar topics but which differ in respect to the other variables. The intent of this portion of the program is to emphasize that evaluating software on its own merits is insufficient. Software evaluation must also take into account particular instructional goals and the specific constraints various literacy programs find they have.

The session will conclude with a question-and-answer period.

**Identification & Assessment of CAI Appropriate to Literacy**

Annabelle Lavier

## Workshop Description:

Computer assisted instructional materials can provide the adult learner with increased skill mastery, heightened motivation, and job related competencies. Adult educators, however, can easily be overwhelmed; software assessment requires expertise and time. This workshop guides the participants through the assessment process with emphasis on practical suggestions and resources.

Objectives:

1. Review the evaluation process used by the Adult Basic Skills Technology Project.

2. Illustrate the different types of software and discuss their educational strengths and weaknesses.

3. Discuss the necessary elements in sofware assessment using the evaluation instrument developed and used by the ABST Project.

4. Demonstrate samples and provide annotated listings of good literacy software.

5. Provide resources and techniques for securing preview software.

## Workshop Outline:

I. ABST Project Model
II. Strengths and Weaknesses of Software Types
III. Necessary Elements of Software Evaluation
IV. Demonstration of Excellent Literacy Software
V. Resources and Techniques in Securing Software for Preview

## Handouts:

+Matrix of CAI programs with their educational strengths/weaknesses
+Adult Basic Skills Technology Project's software evaluation form
+Annotated listings of good literacy software
+Annotated listings of resources

## The Integration of Reading Software into Low Level Reading Instruction

Annabelle Lavier

**Workshop Description:**

Computer assisted instructional software must be integrated into curriculum to be widely used by tutors, instructors and/or staff. This session focuses on examples of teacher preferred/student-used low level literacy software and the integration of that software into coursework. Participants will receive annotated listings of good software as verified by the Adult Basic Skills Technology Project and course integrations for Driver's Education and low level reading.

**Objectives:**

1. Discuss the necessary components of good literacy software.

2. Demonstrate teacher-preferred/student-used literacy software.

3. Present integration of computer assisted software into 0-4 Reading level programs and into Driver's Education.

**Workshop Outline:**

I. Summary of the necessary elements for low level reading software
II. Demonstration of good reading software.
III. Sample integrations
IV. Annotated listings of resources

**Handouts:**

+Software evaluation form
+Model of integrations for Driver's Ed. and low level reading
+Annotated listings of software and resource guides

**Managing your GED Program:**

**GED 100**

Ron Lemay

In 1988 the GED Testing Service will release a new and revised battery of GED Tests to adult education populations. These new tests have created a great interest in the field because of the higher order of skills being tested. In addition, a writing component will be added to the battery. More than ever, adult learners and adult educators will need to monitor the acquisition of skills prior to GED Testing. This session will focus on a software program designed to guide educator and student through the GED process. GED 100 consists of 111 skills in an open-entry format with the flexibility needed for successful, meaningful adult learning. Using a two-pronged approach of management and diagnosis, teacher and student follow a sequential series of diagnostic measurements that provide insight into the student's level of competency.

These diagnostic procedures allow the student to demonstrate mastery in the five areas tested by the GED battery. In cases where remediation of specific skills is necessary, offline print materials are suggested. The management component of GED 100 supplies the learning facilitator with an instant profile of the learner and provides for appropriate intervention when necessary. In addition, the suggested offline print material can be modified to reflect the individuality of the institution providing learning. A free demonstration diskette is being provided to interested participants.

## CAI with Adult Beginning Readers

Panel of Chapter I Teachers
Brett Bixler

Connie Maclay
Eunice N. Askov

Computer-assisted instruction (CAI) courseware for adult beginning readers was developed during the 1984-86 fiscal years with funding from the Pennsylvnia Department of Education, Chapter 1 and 310 Adult Basic Education Special Projects. This courseware uses a "whole word" approach with some word building activities in teaching 1,000 high frequency and functional words. The goal is expanded word recognition for adult beginning readers. The courseware is interactive, branching and responding to the user's answers and needs. It runs on an Apple IIe microcomputer with two disk drives, color monitor, printer and a speech synthesizer (Echo GP). The courseware consists of 28 double-sided disks which deliver the instructional program and record student responses.

A statewide evaluation study of the courseware in parent literacy programs is in progress (1986-87). Low-literate parents of children in Chapter 1 programs in 46 sites are eligible to learn to read using the courseware. Effects of the intervention will be carefully measured and documented. Instruction is being carried out by the Chapter 1 teachers with local literacy councils assisting with recruitment. Technical assistance and teacher training is being offered by the project staff. During this session, a panel of Chapter 1 teachers (who are participating in the study) will share their experiences in using computer-assisted instruction with adult beginning readers.

## Computerized Help for Adult Illiterates: Computer Aided Reading

George W. McConkie

David Zola

Computer Aided Reading is defined as a computer system that displays text on the monitor but has additional information readily available to assist the user in reading and understanding the text. This presentation will describe pilot research and an initial study

using a simple version of Computer Aided Reading with adult illiterates.

The computer was programmed to display text on the monitor and, when a word was touched, to underline that word and to "speak" it into the reader's earphones. Adult illiterates found this assistance to be very helpful, enabling them to read with much less stress and to read passages that they could not handle on their own. Adult education teachers also found it to be very helpful, since students could read with less teacher assistance.

In a study at a prison, some men with 2nd and 3rd grade reading ability spent 45 minutes per day reading adult-level passages with computer assistance instead of attending reading classes. These men showed substantially greater reading gains than matched men who remained in their class.

A more sophisticated version of Computer Aided Reading has now been completed and will be described. It provides two additional types of assistance: definitions of words and explanations of difficult parts of the passage.

## Creating Your Own Software for ABE/GED

Joan Marshal
Julianne D. Rettig
Nancy Robinson

During Fiscal Year 1986-1987, as part of a special projects grant, adult basic education instructors at ARIN IU 28 in Indiana, PA, developed tutorials and tests for computer assisted instruction in ABE/GED classrooms.

Under the supervision of Dr. Joan Marshall, Professor of Adult and Community Education at Indiana University of Pennsylvania, these instructors learned how to create software using a generic program, developed software and piloted it with their students. This software is now available for others to use. This presentation will include:

1) A brief history of the development of the generic software authoring program.
2) An overview of the process used to in-service ABE teachers in the use of this program.
3) A description of the software that has been created.
4) An opportunity for each person to have a hands-on

experience with the software.

Each participant will receive an annotated listing of the software that has been created and will have the opportunity to obtain copies of the software, paying only for the disks.

## Developing a Statewide Toll-Free Hotline

Stephanie Martin Donna Hudson

As a local outgrowth of Project Literacy U.S. (PLUS), the Western Washington PLUS Task Force established a toll-free statewide information and referral hotline. Since September 1986, when local and national radio and television programming on adult illiteracy began, the Washington State Literacy Hotline has provided prospective volunteers and adult learners with a link to their local service providers and has been developing a statewide information base on literacy needs. To date, 2,500 callers have been served--over 800 of whom called for help. A comprehensive statewide literacy resource directory has also been produced by the Hotline office and made available in libraries, community colleges, and employment security and DSHS offices statewide.

Startup funding for the project was secured from local corporations and the state Superintendent of Public Instruction's office. The information and referral system (a refined version of which is now being used) is zipcode-based with counties, cities, zipcodes and programs linked for generating internal reports and followup caller reports to programs. Despite a very compressed initial timeframe, the system worked smoothly during the heaviest-use period, September and October 1986. But problems were encountered in a few months when some of the hardware malfunctioned and software application refinements were implemented.

Our two-hour presentation will address the costs and concerns of starting up such a system, the possible pitfalls to anticipate and avoid, planning and implementing further developments, and expanding reporting capabilities. We will touch on how to develop related projects and services--some income-generating--that are a natural outgrowth of an information line, volunteer staffing and training, securing continuation funding, publicity coordination, and

the production of a resource directory as well as networking and sharing data and resources.

We will address these issues from the perspective of a team that has worked together from the high-pressure startup phase through periods of success and periods of stress when problems began to occur. We will share sample copies of forms, reports, and materials and, if time allows, will show a 10-minute video developed to educate and encourage the support and involvement of state government and private business.

## The Smart Shopper: Making Software Choices you Won't Regret

Donna Miller-Parker

This share session will give participants an evaluation checklist to use when reviewing software for purchase. There will be opportunity to discuss common negative and positive aspects of software which may affect its usability in a classroom. Some positive examples might be the avaiilability of lab packs, ample documentation, and teacher modification. Negative examples might be programs which provide drill rather than instruction, don't provide feedback or explanation after incorrect answers, or have such complicated instructions that they are difficult to use.

## Beyond Basic Literacy: Critical Reading with LECTOR

Joseph Orndorff

The Concentrated Studies Program at Duquesne University works with students whose language skills are adequate but clearly unequal to doing post-secondary level reading and writing. Using a combination of computer aids and personal coaching, the Program tries to turn these students into critical readers and thinkers capable of doing well.

This presentation will discuss and demonstrate the computer package called LECTOR which Duquesne has developed for working

with students who have elementary reading skills, but who lack the ability to read beyond the basic level.

## Templates for Literacy

Antonia Stone

Playing To Win, Inc., under a 3 year grant from NYNEX, is engaged in the preparation of a guide to the integration of business tool software with adult literacy instruction.

Several of the activities designed for this project will be presented at this workshop. Appleworks software will be used, but the content will be appropriate for conversion to any word-processor, database, and/or spreadsheet program available to a participant.

The purpose of the activities is two-fold: (1) to provide a computer environment for literacy learning; and (2) to give learners a start in using standard computer applications. Activities will focus on beginning reading, writing, and math skills (0 - 4.5).

Participants need have no prior computer experience.

## Effective Use of Computers and Software in Adult Literacy Programs

Carol J. Szatkowski

Volunteers in Tutoring Adult Learners (VITAL), sponsored since 1977 by Monroe County Public Library, Bloomington, Indiana, instituted the use of the Apple IIe computer as a teaching/learning option for its participants in October, 1985. As the winner of the 1985 Governor's Award for Model Volunteer Adult Literacy Programs, VITAL, together with the library, supports a philosophy of using an eclectic approach to providing learning experiences for the learners it serves. The use of the computer not only provides a new mode of learning for adults, who, for a variety of reasons, have now resumed their educational pursuits, but it gives them a new way to be in control of their lives and succeed without the stigma of previous failure.

VITAL provides free one-to-one tutoring services for approximately 150 individuals and is completely staffed by an equal number of volunteer tutors. At present, paid staff include a part-

time coordinator, a part-time computer consultant, and three work-study students. Tutor/Learner pairs using the computer on an ongoing basis number 10 percent of the total, with an additional 10 percent trained and using the computer on a occasional basis.

Presentation of material includes how to implement the use of a computer within an already existing adult literacy program, where to obtain quality software for use with adult learners reading at a zero or very low level, providing suggestions as to training volunteer tutors who may have little or no experience using a computer, how to begin using a computer as a part of a literacy program even with a limited budget of five hundred dollars or less, suggestions for obtaining organizational and community support for such a program, and examples of successful use of computers with all age and ability levels of adults from those in their late teens to senior citizens.

## Information Sharing: The Goal Oriented Adult Learning Program

Lori Weyers
Sue Schmoekel
Kay Chitwood

The Goal Oriented Adult Learning (GOAL) Program at Fox Valley Technical Institute in Appleton, Wisconsin is a basic skills program designed to assist adults in a variety of ways. The Program works with adults in meeting their individual goals such as: improving their reading, math, English, and writing skills; it assists adults in preparing for their GED tests; the Program prepares persons for retraining in pre-technical areas of science and math; it offers basic skills courses to employees at their job sites.

The program serves nearly 5,000 adults at 19 locations on a yearly basis. It is competency-based, individualized with flexible scheduling in an open lab setting. The 50 instructors work a variety of schedules and are all certified by the Wisconsin Vocational, Technical and Adult Education System.

Between August, 1986 and October, 1987, the GOAL Program at FVTI has agreed to become a Test and Evaluation Site as part of a joint study with the IBM Corporation. The overall objective of this study is to determine how computers and computer programs can be

used to improve the teaching of basic literacy skills, GED, and developmental studies to adult learners. The GOAL instructors, staff, and students at FVTI are presently evaluatiing IBM-developed Kindergarten through 12-grade courseware to determine its effectiveness with adult learners.

A representative from IBM and the two coordinators for the joint study at FVTIwill present an hour-long presentation which will address the following:

- Why is IBM involved in such a study?
- Why was the GOAL Program at FVTI selected?
- What are the specific objectives of the study?
- How did the GOAL Program at FVTI implement the study?
- What are the projected outcomes from this study?

## A New Path to Literacy: The Microcomputer and Interactive, Language Experience Based Software

Elaine G. Wangberg

Two series of interactive software lessons have been developed to promote the reading and writing abilities of illiterate adolescents and adults. Objectives of this software are: 1) to increase functional reading ability, 2)to increase writing ability, and 3) to provide an introduction to the use of the microcomputer and word processing. LEAP I and II are available in Apple IIe, IBM compatible, and TRS-80, Model III, 4 or 4D translations.

The Language Experience Approach provides the basis for the software lessons in the LEAP program. With this approach, instruction is relevant and of interest to older learners, is highly individualized, and provides a good"match" with the learner's language and background experiences. Prior to the use of the microcomputer, the Language Experience Approach required a great deal of teacher time. LEAP software decreases the teacher time required by enabling the computer to interact individually with the

learner and by providing the teacher with timesaving teacher software programs.

LEAP software prompts students to input text about their lives into the microcomputer, directs the microcomputer to develop lessons from this, text input, compiles individual alphabetized student word lists, and provides follow-up activities. Students improve reading and writing abilities through meaningful composition, including the stages of prewriting, writing, rereading and proofreading, revising and rewriting. This methodology is consistent with the thrust of new writing sample requirements of G.E.D. tests. LEAP I is designed for students reading between grade 1.5 and grade 5. The second series of software (LEAP II) requires a reading level of grade 3.5 to 7.9. Field tests have shown an average of one year gain in reading ability after an average of 22 hours of instruction.

## Enhancing Reading and Writing with Current Software

Deborah Young

The objective of this session is to present computer software and activities consistent with current research on the reading process and the writing process. Adult learners need interactive programs to help them use technology confidently. Thoughtful selection and dynamic use of available software will increase adults' confidence with technology and, at the same time, contribute to reading and writing growth. This presentation identifies three types of software programs that have been used successfully in an adult literacy project: comprehension/strategy programs, data bases, and word processor's. Specific suggestions for using these programs will be illustrated with slides.

# PRESENTATIONS ON STAFF DEVELOPMENT

## Technology Behind Bars

Peter Cookson Priscilla Carman

The inmate-organized Literacy Council at the State Correctional Institution at Huntingdon, PA has been collaborating with the Institute for the Study of Adult Literacy at Penn State University since September 1986. In a joint effort sponsored by the National Institute of Corrections, they are creating a series of six staff development workshops which are video and audio taped for later evaluation and training purposes by the Council. Information from the workshops and other sources is used to produce audio and print-based instructional modules which will assist in developing and training literacy councils in other correctional institutions.

The immediate past president of the Literacy Council, the council advisor, and the project director will review the process and progress of the project.

## Using Video Packets for Staff Development in Adult Basic Education

John Fleischman John Tibbetts

Teaching undereducated adults in California is largely a part-time, often isolated occupation. Teachers, at worst, have no specified training in teaching methodology and, at best, have from 4 to 9 semester units of training in adult education Likewise, because of day and evening classes in scattered locations, it is often difficult to provide on-going staff development for these teachers.

To help remedy that need, a series of videotapes demonstrating effective competency-based teaching sequences and varied teaching strategies has been prepared. To accompany each demonstration video, a facilitator's guide has been designed. Each guide contains all overhead and handout masters as well as suggested activities and time blocks. The guide may be used as a step-by-step staff development workshop session or it may be used by a small group or individual teacher. Although the "packets" (guide plus video) are most often used in a workshop mode, individual packet use has been found especially useful for isolated teachers or to accommodate frequent teacher turnover. The videos are also designed in such a

way that they may stand alone as demonstrations of exemplary teaching.

This session will:

1. Demonstrate competency-based English As A Second Language (ESL) at the beginning level

2. Provide a handout listing the content sequence of the accompanying guide and make available for inspection complete packet

3. Discuss availability and use of this and other guides (completed and in-process)

4. Entertain questions and suggestions from the audience.

## Microcomputers & Teaching Styles: Creative Applications & Integration of Commercial Courseware

Frank A. Migliorelli

In order to successfully integrate the use of microcomputer technology into the teaching of adult literacy, educators must understand the tools available to them. The issue of what software to use and how to effectively use it is a key point in using computers to teach literacy. While the number of programs available is large, the number of quality products is limited. Finding this group of programs and understanding how to incorporate them into various teaching approaches is the focal point of this presentation.

Successful use of this technology lies with a teacher's ability to integrate its use into his or her present teaching approach. The use of application and "add-on" programs provides teachers with a new flexibility for teaching adult literacy. Application programs, such as word processing and data-bases, introduce a student to new and effective uses of writing. Add-on programs, which allow teachers to create content material appropriate to a specific student's learning levels and needs, give an instructor opportunities for providing students with practice in various subject areas.

Along with the discussion/demonstration of software, the presentation will look at the effect the computer has on the role of the teacher. The implications of the teacher's role as facilitator and question poser emerges as the new technology enters the classroom.

At the conclusion of this presentation, the participant will have a better understanding of the critical issues that need to be addressed in order to successfully use the computer as a tool for teaching adult literacy.

## Computers and the Role of Teachers: Learning from Elementary/Secondary Education

Jon Moscow

Computers have been used in children's education longer and more intensively than in adult education. This presentation looks at similarities in use and at lessons relevant to literacy teachers.

Both elementary/secondary and adult education teachers face pressure to produce rapid rates of improvement in student performance on standardized tests--a pressure accompanied by a widespread perception that computer use will achieve this. How do this pressure and perception get played out in decisions to buy and utilize computers? How do they affect decisions such as hardware and software selection or purchasing a computer-managed learning system?

This presentation focuses on technology and the teacher's role, paying particular attention to the teacher's autonomy and participation in decision-making. Its thesis is that technology should enhance, not diminish, the teacher's role. As a corollary, use of technology should be accompanied by a strong emphasis on staff development.

What actually happens when technology is introduced depends on a school's political/social/educational environment. Examining unspoken assumptions clarifies that the nature of computer use is <u>not</u> inherent in the technology.

## Helping Adults Learn:
## Customizing Literacy Training for Teachers and Tutors

Dehra Shafer Margaret Welliver

"Helping Adults Learn" is a five part videotape series designed to address the ongoing need for in-service training among teachers in literacy, ABE, GED, and other adult basic education programs.

Many teachers in adult basic education programs receive their formal training as secondary educators. They come to adult education with a solid understanding of their subject matter but with little knowledge of the adult student and of the unique problems and opportunities that adult students present in terms of teaching methods and techniques. In addition, many teachers of adults are employed on a part-time basis. This and other factors make it difficult for teachers to obtain the in-service training needed for them to become effective in working with adults.

The underlying assumption of "Helping Adults Learn" is that local adult education courses need to have locally available materials that will make it possible to readily orient new teachers or provide in-service for existing staff. The instructional approach of this series uses television, supported by an instructional guide, to provide an orientation to the unique characteristics of adult learners, to illustrate effective ways to communicate and counsel students, and to show examples of how student needs and experience can be used as instructional resources. The programs accomplish their objectives through interviews with teachers, administrators, theorists, and adult students, along with scenes of adult education in action.

Our presentation will summarize how and why videotape training was developed to meet the needs of adult literacy teachers and tutors and will discuss the use of the tapes by practitioners in the State College Area School District's Community Education ABE/GED program.

## Research Plus Media: Powerful Tools For Teaching Literacy Skills

John Tibbetts John Fleischman

Research has provided dramatic evidence that "Cooperative Learning" as opposed to individual study produces giant gains in literacy achievement -- especially with non-Anglo adults. The problem: How to train teachers to use this approach successfully?

Research again provides an answer. The studies of Joyce, Showers and others reveal that traditional staff development presentations produce little-to-no change in teacher classroom behavior. The one technique, when coupled with presentation, demonstration and feedback, that makes significant change in teacher behavior is "coaching"--especially when teachers coach other teachers.

A pilot study in California by the State's Staff Development Project has combined the teaching techniques of cooperative learning with the staff development process of coaching. To accomplish the training, video teaching demonstrations and video coaching demonstrations were used as models for the teachers being trained. In addition, they were able to have the demonstration videos on site for reference and support when needed.

Finally, techniques of "Mental Rehearsal" are being used by some of the pilot teachers to see if that technique can speed up or otherwise facilitate the adding of new techniques to a teacher's repertoire.

This session will:

1. Report the results of the pilot testing in three diverse adult basic education programs (including both ESL and ABE/Basic Skills)

2. Preview the entire process through the use of video training tapes

3. Provide for audience discussion of the ramifications of this study including possible modifications, logistics, and support needed -- both human and financial.

## CAI in ABE: The Power Switch

Dr. E. Carole Tyler

Presentation

In this presentation, I will describe strategies used to train instructors to use a computer-assisted instructional (CAI) program to teach adult basic education (ABE). Discussion will focus on participants' questions about my experience as Coordinator of the North Carolina Community College's 1985-86 PLATO Installation Project and the 1986-87 PLATO Plus Project - projects designed to impose an infusion of technology in a program area where the intended users were unfamiliar with the use of microcomputers.

Background

The North Carolina Community College System installed 1,000 microcomputers in 58 local institutions and trained 670 instructors who teach in132 different sites. This flurry of activity was prompted by an unsolicited gift from the North Carolina legislature to the ABE program in each of the local community colleges, raising questions about who controls local program content decisions.

Results

Reports indicate that the overwhelming majority of ABE instructors and students in North Carolina are enthusiastic about using CAI. However, no conclusive data are available for reporting specific learning gains, and no end is in sight to the debate about who really determines what will be taught in ABE.

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